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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,063	06/22/2005	Peter Geigenberger	13311-00008-US	4909

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EXAMINER

BAGGOT, BRENDAN O

ART UNIT PAPER NUMBER

1638

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/540,063	Applicant(s) GEIGENBERGER ET AL.	
	Examiner Brendan O. Baggot	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-46 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-3, 5-8, 11-14, 18, 19, 45-46, drawn to a plant expressing leghemoglobin.

Group II, claim(s) 4, 5, 6-8, 9, 10, 11-14, 18, 19, 23, 24, 45, 46, drawn to plants expressing either hemoglobin; OR leghemoglobin and hemoglobin.

Group III, claim(s) 15-17, drawn to nucleic acid encoding SEQ ID NO: 1.

Group IV, claim(s) 20-22, drawn to nucleic acids encoding SEQ ID NO: 3.

Group V, claim(s) 20-22, drawn to nucleic acid encoding SEQ ID NO: 5.

Group VI, claim(s) 25-27, 29, 30-44, drawn to method of modifying storage reserve content with leghemoglobin.

Group VII, claim(s) 28-44, drawn to method of modifying storage reserve content with either hemoglobin; OR leghemoglobin and hemoglobin.

If Applicant chooses EITHER Group II or group VII then Applicant MUST choose EITHER:

- a. hemoglobin; OR
- b. leghemoglobin and hemoglobin.

(1) If Applicant chooses a., then Applicant MUST also choose either SEQ ID NO: 3 OR SEQ ID NO: 5.

(2) If Applicant chooses b., then Applicant MUST also choose leghemoglobin AND either SEQ ID NO: 3 OR SEQ ID NO: 5.

The inventions listed as Groups I- VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The inventions are linked by the technical feature of a leghemoglobin or a hemoglobin. However, this technical feature is not special because it does not constitute an advance over the prior art. McElroy (6232526US, 5/01) teaches hemoglobin (Col 36, Ln 3-15) and Rogers (US 6174724 B1, 1/01) teaches leghemoglobin (Col 1, Ln 62-67).

Inventions I-V and VI-VII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the product, transformed plants, can be used in a materially different process: namely to produce something other than altered reserve substances and / or as propagation material. Thus, I-V and VI-VII are unrelated each from each other and are properly restricted each from each other as distinct products and processes of use.

Inventions VI-VII are unrelated each from each other. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions: 1) achieve different effects, each producing a different amino acid sequence; and 2) use different reagents namely different genes. Thus, having different effects, Groups IV-VI are properly restricted each from each other.

Inventions I-II, are unrelated from each of III-V. Inventions are unrelated if it can

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be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together. Isolated DNA fragments, such as those in III-V are not disclosed as capable of use with the transformed plants of I-II, and DNA fragments capable of coding for amino acid translation have very different functions from living plants transformed with a non- plant protein encoding gene for the purpose of molecular farming of plant reserve substances. Thus, I-II and III-V are properly restricted.

Inventions III-V are directed to related sequences containing different nucleotides sequences. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, the unique sequences have a different design and effect as shown by their divergent sequence and the protein transcribed therefrom and are mutually exclusive, the sequence of one being different from the other.

Inventions I-II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are not disclosed as capable of use together and have different designs namely singly versus doubly transformed.

Because these inventions are classified in different classes and subclasses, are

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distinct for the reasons given above, have acquired a separate status in the art because of their recognized divergent subject matter and/or fields of search, the search for one is not required by the others, and because a search of all the Groups would place an undue search burden on the Office, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Remarks

2. No claim is allowed. Election is required.

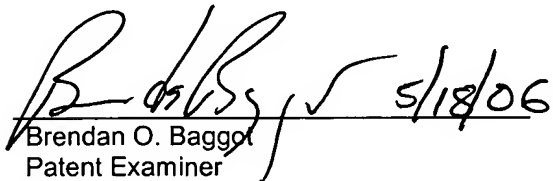
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brendan O. Baggot whose telephone number is 571/272-5265. The examiner can normally be reached on Monday - Friday.

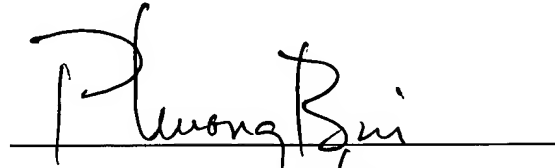
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571/272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

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Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Brendan O. Baggot
Patent Examiner
Art Unit 1638


Phuong Bui
5/19/06

bob